

ERA Ref.: EA/00052/19

Description Proposal: PA 08471/19 - Construction of a berm and revetment including dredging at Valletta Grand Harbour.
PA 04783/20 - Construction of new Breakwater arm beneath St. Elmo to offer protection to the Grand Harbour during North Westerly storms

Location: Site at Valletta Grand Harbour, Il-Port Il-Kbir, Belt Valletta

Subject: Table with recommendations and ancillary reasoned justifications provided by the public, government entities, E-NGOs and relevant local councils, during 30-day public consultation on Terms of Reference, on any matters that they wish to see included in the EIA terms of reference.

Consultation period: 04 August 2021 – 03 September 2021

No.:	From	Comments
1	Occupational Health & Safety Authority (email dated 05/08/2021)	<p>Please find below OHS's comments.</p> <p>The employer at this place of work shall ensure that:</p> <ul style="list-style-type: none"> A. All work activities comply with the requirements of Act XXVII of 2000 and all relevant OHS regulations; B. One or more persons having the necessary aptitude, capabilities, competence and training shall be designated to assist the employer in undertaking the measures which are required to be taken in relation to the protection of occupational health and safety and the prevention and control of occupational risks, as per LN 36 / 2003; C. ALL work activities falling under one's responsibilities are covered by a suitable, sufficient and systematic risk assessment carried out as per LN 36 / 2003 and other relevant OHS regulations. Without prejudice to the legal obligations of an employer, this risk assessment shall, <i>inter alia</i>, refer to: <ul style="list-style-type: none"> (i) The measures to be taken against risks from manual handling of loads as per LN 35 / 2003; (ii) Protection against exposure to chemical agents at work as per LN 227 / 2003 including, but not limited to measures against inhalable dusts and metals; (iii) The measures to protect workers from risks from exposure to the sun and adverse weather conditions; (iv) The required emergency prevention, preparedness and response arrangements including first aid and firefighting measures; (v) Protection against physical agents at work including but not limited to risks from noise and vibration; (vi) Protection of workers from risks of electrocution as required by LN 44 of 2002; (vii) Personal protective clothing / equipment to be used by workers; (viii) Suitable welfare facilities to be made available for staff; (ix) The required health and, or safety signs and; (x) Training and competence of workers to perform the assigned tasks;

		<p>This risk assessment shall also make reference to the necessary health surveillance that is required wherever there is revealed an identifiable occupational disease or adverse health condition related to the work involved OR the likelihood that a disease or condition may occur under the particular conditions of work, as per LN 36 / 2003 and other applicable OHS regulations.</p> <p>D. All work equipment complies with the relevant provisions of LN 293 / 2016, including where applicable, by ensuring that work equipment is duly examined by a competent person and a report of such examination is kept by the employer and (where applicable) also sent to OHSA and;</p> <p>E. Furthermore, all construction related works falling under the applicability of LN 88 / 2018, shall be conducted in compliance with the provisions of these regulations.</p>
2	<p>Member of the Public</p> <p>(email dated 15/08/2021)</p>	<p>Please find my written comments on matters I wish to see included in the Terms of Reference, as required integral components of the EIA:</p> <p>UN Sustainable Development Goals The TOR must ensure that the EIA fully assesses the impact of the proposed project on the UN Sustainable Development Goals defined in 2015, to be achieved by 2030.</p> <p><i>SDG 11: Sustainable Cities and Communities</i> is particularly relevant. The following dimensions will need particularly careful scrutiny in the EIA:</p> <p>- Bathing Water Quality Bathing water quality is a focus in the <i>Indicators for European cities to assess and monitor the UN Sustainable Development Goals (SDGs)</i> co-published by the European Environment Agency in 2020, and which includes the following indicators as examples of best practice under the aspect of Urban Water:</p> <ul style="list-style-type: none"> - Demonstrating that all non-industrial water bodies are swimmable and fishable during 90% of days in the past year - Demonstrating a steady reduction in water closures of at least 2% annually towards achieving 90% of days being swimmable and fishable - Contribution of surface water features to the attractiveness of the city and wellbeing of its inhabitants - Actions to improve the quality of surface waters in city area and beyond - Projects to reconnect citizens with waterbodies e.g. creation of wetland parks, improving water quality to allow for swimming. <p>The shoreline from the Siege Bell Memorial to Fort Saint Elmo represents the only presently swimmable area of the Grand Harbour presently available to the Valletta community. It is therefore an important component of the quality of life the community. The proposals described in the PDS appear to pose a threat to bathing water quality and swimmability in this area for at least three reasons:</p> <ul style="list-style-type: none"> - The proposed breakwater at Fort Saint Elmo is likely to have a direct negative impact on the rate of replacement of water in the harbour, resulting in higher concentrations of toxins, and therefore a reduction in bathing water quality; - The proposed berm will disrupt and irreversible change this shoreline, making it much less suitable for swimming; - The proposal appears to be part of a wider vision aimed at further intensification of use of the harbour by shipping, which appears to be in conflict with a vision for the harbour which makes its shorelines more livable and its seas more swimmable. <p>It is therefore strongly recommended that the TOR ensures that the scope of the EIA will include a Health Impact Assessment that includes a thorough and unequivocal study of the short, medium and long-term implications of the proposed works on bathing water quality.</p> <p>- Social Impact Assessment</p>

A closely related concern is the social impact of the proposed project. The shoreline in question is one of the few areas available to Valletta residents to moor or land a small boat. This represents an additional important element in the quality of life and the recreational and social fabric of the city.

It is therefore strongly recommended that the TOR ensures that the scope of the EIA will include thorough Social Impact Assessment, incorporating a genuine consultation process with the local communities and interest groups that would be impacted.

World Heritage Considerations

The works outlined in the PDS have a direct and significant impact on the shoreline of Valletta, which is a UNESCO World Heritage Property. For this reason, Malta is required, in terms of paragraph 172 of the Operational Guidelines of the World Heritage Convention, to seek the views of the UNESCO World Heritage Centre on the impact of the project at this early stage, before any commitments are made.

It is therefore strongly recommended that the TOR requires the EIA to undertake the required consultation with the UNESCO World Heritage Centre, and to incorporate its outcome in the EIA report.

Cultural Heritage Impacts

In addition the World Heritage considerations outlined above, the proposed works would have a significant impact on a number of features which fall within the scope of the Cultural Heritage Act, some of which are listed below (this is not an exhaustive list).

- Geological Features

The shoreline that would be impacted by the proposed works is of considerable geological interest. The area below the Siege Bell Memorial is characterised by a large cave with two interconnected tubes which have formed along two parallel fault-planes, with an opening to the harbour at either end. Although not scheduled to date, this cave system certainly merits scheduling.

- Industrial Archaeology

The shoreline that would be impacted by the proposed works is characterised by a concentration of features of great industrial archaeological interest, which although not scheduled to date, certainly merit scheduling. These include an extensive infrastructure which was integral to the proper functioning of the historic breakwater that was built in the early twentieth century. A series of wave-traps were cut into the globigerina limestone in order to help reduce reflection of waves into the harbour during a north-westerly storm. The rock-cut wave traps are complemented by large blocks laid on the seabed to help absorb waves entering from the main entrance of the harbour.

It is unclear if the performance of these wave traps has been scientifically measured as part of the studies on which the recommendation for a berm has been made. Nor is it clear if there is yet any scientific study in how the berm may interfere with the performance of the wave traps, and an objective comparison which gives a true picture of what the net improvement in wave climate would be.

It is therefore strongly recommended that the TOR requires the EIA to conduct a thorough Cultural Heritage Impact Assessment, which includes a thorough survey of the documented as well as unknown cultural heritage features in the area, on land and underwater, ranging from geological, to architectural or industrial heritage.

		<p>It is further recommended that the TOR requires the EIA not to take the recommendations for the breakwater and the berm at face value, but to ensure that there are through scientific studies of the performance of the existing historic wave mitigation and water replacement measures, and the impact of the proposed works on their effectiveness, in order to have a clear base line against which to evaluate the usefulness or otherwise of the proposed works.</p>
3	<p>Environmental Health Directorate</p> <p>(email dated 31/08/2021)</p>	<p>With reference to your e-mail dated August 2021 regarding subject indicated in caption and following review of the Project Description Statement, please be informed that we would like to have the following issues related to public health included in the terms of reference for this proposed development:</p> <ol style="list-style-type: none"> 1. Air pollution impacts assessment <ul style="list-style-type: none"> • Emissions from heavy vehicles • Transports, storage and handling of waste materials • Operational traffic • And their effects on the surrounding. <p>Necessary monitoring and mitigating measures must be clearly stated.</p> <ol style="list-style-type: none"> 2. Noise and vibration impacts including construction activities, operational traffic and from other operational activities. Required monitoring and mitigating measures must be clearly stated 3. Traffic Impact Assessment and mitigation measures. 4. Light pollution impact and mitigation measures. 5. A Waste Management Plan shall be implanted which should include the impacts from waste generated during the construction (dredging and construction material). Hence the importance of a detailed Construction and Waste Management Plan, which should be enforced by the site project manager. Details of monitoring and feedback mechanisms must be clearly stated and adhered to. 6. Adverse impacts caused by heavy machinery used both on land and sea for this project. Necessary monitoring and mitigation measures are to be clearly stated and adhered to. Included the method used for the refueling of said machinery. 7. Adverse impacts caused by unsafe, inadequate storage and improper handling of raw materials on site and from potential accidental spillage of hazardous fluids, fuel and lubricants. Necessary monitoring and mitigation measures are to be clearly stated and adhered to. 8. Although in the area of influence of the scheme there are no official bathing sites, there are sites in the vicinity which are used for swimming. Hence monitoring and mitigation measures during construction phase are to be clearly stated. 9. Clearly identify the measures and mitigation measures to be taken in case of rain, heavy winds and storms that may affect the works and might cause undesired spillage at sea and/ or land during the project. 10. Clearly identify the hydrodynamics, and sea water circulation within the harbor. The impacts and mitigation measures are to be clearly stated. 11. Details of proposed sanitary facilities for workers. 12. The overall cumulative impacts of the development on the general public. <p>The EIA should also include a detailed description of the measures envisaged to prevent, minimise and where possible offset any significant temporary or permanent adverse health effects and nuisances on the Area of Influence and the general public. This should include details regarding monitoring programmes that may be proposed. The EIA should also identify, describe and discuss in detail the possible health effects of any residual impacts that cannot be mitigated.</p>

4	BirdLife (email dated 02/09/2021)	<p>BirdLife Malta has reviewed the documents presented for the public consultation with regard to the Construction of a berm and revetment including dredging at Valletta Grand Harbour & Construction of new Breakwater arm beneath St. Elmo to offer protection to the Grand Harbour during North Westerly storms, and would like to provide our suggestions to be considered for the Terms of Reference.</p> <p>Firstly, we would like to emphasize that the Grand Harbour Local Plan identifies St Elmo Point as a Site of Scientific Importance (Geology) and an Area of Ecological Importance. The area of Grand Harbour overall is an Area of High Landscape Value, while Valletta is listed as a UNESCO World Heritage Site and all of it, including the waterfront zones, is designated as an Urban Conservation Area. The Local Plan also states that in the areas indicated as Valleys, Areas of Ecological / Geological Importance and Sites of Scientific Importance, “development of any description which could prejudice the unique natural characteristics of the areas or adversely affect individual sites will not be permitted”. Taking into account all mentioned, a thorough Environmental Impact Assessment should be undertaken which shall include the following considerations:</p> <ul style="list-style-type: none"> ● during both the construction and operation phases, the project is expected to contribute substantially to the light pollution in the area. The impact of an additional source of light in the area which is already heavily polluted needs to be closely analysed, and feasible mitigation measures should be offered to minimise an adverse impact on biodiversity; ● as it is said in the PDS, all works will be carried out from the marine side, which means the involvement of heavy vehicles, like barges. In this case, there is a risk of oil spill, increase in turbidity and contamination of the surface water; ● the impact on water quality should be evaluated as well, specifically the contamination of water during excavation due to the release of hazardous substances, like Mercury and PAHs presence of which on the site is mentioned in the PDS; ● the project will generate a significant amount of waste - about 17,000m³ of excavated rocks and other waste which will be dumped offshore. Considering the presence of contaminants found on the site, as well as the volume of waste, there is a need to work out a proper waste Management Plan and relevant mitigation measures; ● a proper assessment of noise and vibration generated during the construction phase should be included into the EIA; ● given the nature of the project, the assessment of environmental impacts associated with the waves hydrodynamics should be undertaken; ● the construction phase of the project will include the excavation and dredging of a seabed (about 14,000 m³), therefore the assessment of the impact on geomorphology shall be carried out; ● the impact on the disturbed marine habitat, including marine flora and fauna species present on site must be assessed, given that the site hosts a rich benthic community.
5	Superintendence of Cultural Heritage	<p>In response to your email of 4th August 2021, please find recommended Terms of Reference for a Cultural Heritage Assessment i.c.w. the Environmental Impact Assessment (EIA).</p> <p>1.0 Preamble</p>

(email dated
03/09/2021)

The proposed project would involve intensive development over a large area. Potential impacts may occur within the footprint of the project, in the immediate environs, and along access routes in the course of works. Potential impacts may include direct and immediate material impacts, as well as subsequent impacts that might arise from the modification of the existing situation.

More specifically, the proposed development will impact directly on the Grand Harbour and its approaches. The Superintendence immediately draws attention to the very high cultural heritage value of this area noting that the Grand Harbour is identified by the Planning Authority as an Area of High Landscape Value, immediately congruent to Valletta and the Three Cities.

The Superintendence draws attention to the status of Valletta which is inscribed on UNESCO's World Heritage list. The Grand Harbour itself falls within the buffer zone drawn up to protect the cultural heritage value of this World Heritage site. The Grand Harbour, defined even by its spatial and visual relation to Valletta and the Three Cities, is a cultural landscape of very high value achieving an iconic status that defines the national cultural identity. Perceptions and appreciation of the Grand Harbour as a visual and spatial experience are of very high value that warrants protection at the very highest levels.

The Superintendence further notes that the littoral of Valletta along which these works are proposed is characterised by a wealth of cultural heritage assets including scheduled fortifications of very great cultural heritage value and features specifically associated with maritime activity. These features also include British period architectural and engineering works related to the defence of the harbour. These features would include gun and searchlight emplacements, and features related to the Boom Defence System, dating to the Second World War.

Other very significant features include historical civil engineering works, specifically associated with wave climate and its control, including the breakwaters constructed in the early twentieth century and concomitant features such as spending beaches cut into the bedrock, and large boulders/blocks laid on the seabed and also intended to control wave activity.

The works as proposed will impacted directly on tracts of the seabed and may impact on archaeological remains that may survive on or within the seabed. Such remains may included features related to shipwrecks or to material lost or jettisoned at sea.

2.0 Scope and Definitions of the EIA

For the purposes of this document, cultural heritage is defined by Article 2 of the Cultural Heritage Act (2019). This includes movable or immovable objects of artistic, architectural, historical, archaeological, ethnographic, palaeontological and geological importance.

2.1 The study area will include:

- a) The total footprint of the proposed project including proposed installations at sea
- b) A 500 metre stretch along the littoral away from the proposed works.

2.2 In the context of this particular application, cultural heritage considerations may include:

- Perceptions and legibility of the Grand Harbour, Valletta and the Three Cities
- Features of archaeological value and potential, including known and unknown underwater features present on or within the seabed
- Military and civil architecture from the Knights period to British period
- Civil engineering works related to coastal and maritime activity
- Vernacular structures, related even to traditional maritime or coastal activity
- Distinguished buildings or gardens
- Features related to traditional maritime or coastal activity, such as saltpans, boat houses and mooring points

The above cultural heritage definitions and considerations are not to be considered as exhaustive. The EIA must consider all other forms of cultural heritage, both known and unknown.

2.3 The Environmental Impact assessment will:

- Describe the Cultural Heritage assets within the study area
- Analyse the cultural heritage features within the context of the cultural landscape
- Assess the physical, spatial and visual impacts of the proposed development on the cultural heritage assets
- Propose corrective measures for the protection of the cultural resources.

3.0 Methodology

In quantifying the cultural heritage assets within the study area, and assessing the impacts of the proposed development, the EIA will undertake:

- Description and assessment of the context and of cultural heritage properties;
- Desktop and archival research along the footprint and extending along the littoral including fortifications, civil engineering works including breakwater and Fort St. Elmo, and from the Great Siege memorial under Lower Barrakka Gardens;
- Given the location of the proposed works, data capture must include visual inspection of the seabed and sub-bottom profiling, as may be necessary. Such inspection and profiling is to be within the footprint of proposed interventions and to a distance of 50 meters from such interventions;

All fieldwork is to be authorised by the Superintendence of Cultural Heritage as defined below under point 4;

- Consultations with any relevant bodies, including the Superintendence of Cultural Heritage, Heritage Malta, the University of Malta, NGOs and Local Councils;
- Compilation of an inventory of the cultural heritage assets identified within the study area. The features of cultural heritage are to be described and plotted with grid references, on Data Capture Sheets, the design of which should be approved in advance by the Superintendence of Cultural Heritage. The Data Capture Sheets will be presented as an appendix to the EIA. The analysis of the features will be included in the main report;
- A cultural heritage Risk Assessment Map examining the various impacts of the proposed project is to be included in the EIA;
- In view of the very high landscape value of the proposed development site, the study is to include visual impact assessment including the compilation of photomontages of the proposed development in relation to the harbour and the scheduled city of Valletta.

Viewpoints are to be at various locations within the harbour area, including the existing breakwaters, Fort St Elmo, the Lower Barracca gardens, various points on the littoral of Valletta and from maritime approaches to the Grand Harbour.

4.0 Authorisation by the Superintendence of Cultural Heritage

As per Cultural Heritage Act 2019, any form of investigation or prospection required for the identification of cultural heritage (including excavation, field walking, topographic survey and remote sensing) may only be undertaken by the Superintendence of Cultural Heritage or with its written approval.